DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mark Karish on 02/26/2009.

The application has been amended as follows:

Claim 1 is replaced with the following amended claim:

1. A system comprising

(1) a principal microfluidic conduit,

~~(2) a dead volume adjacent to and in liquid communication with the principal microfluidic conduit, and~~

(2) a microfluidic inlet conduit which is in liquid communication with the principal microfluidic conduit at a junction;

~~(3) a drain conduit from the dead volume~~

(3) an elongate arm which extends from the principal microfluidic channel into the junction and has an outer surface which forms, with walls of the junction, a dead volume adjacent to and in liquid communication with the principal microfluidic conduit;

(4) a drain conduit extending from the dead volume

Claim 2 is cancelled.

4. A system according to claim 3 wherein the outer surface of the elongate arm forms, with the walls ~~which comprises an elongate arm which (i) extends into the junction, and (ii) has an outer surface which forms, with walls~~ of the junction, a passageway of substantially annular cross-section through which, when the system is in operation, liquid flows as it flows from the inlet conduit to the principal conduit.

8. A system according to claim 1 wherein the principal microfluidic conduit is a detection conduit for examining a liquid sample, and which comprises

(1) a microfluidic inlet conduit having a first longitudinal axis;

(2) a microfluidic outlet conduit having a second longitudinal axis;

(3) ~~the~~ a detection conduit, the detection conduit being in liquid connection with the inlet conduit and the outlet conduit and which has a third longitudinal axis, the third longitudinal axis being at an angle to the first longitudinal axis and at an angle to the second longitudinal axis;

(4) a first junction which lies between the inlet conduit and the detection conduit;

(5) a second junction which lies between the detection conduit and the outlet conduit;

(6) a first junction conduit which extends from the first junction away from the detection conduit, the first junction conduit and the detection conduit having substantially coincident axes;

(7) a second junction conduit which extends from the second junction away from the detection conduit, the second junction conduit and the detection conduit having substantially coincident axes;

(8) a first arm which (i) lies within the first junction conduit and extends into the first junction, (ii) defines, with the first junction conduit, the dead volume, the dead volume having a substantially annular cross-section, and (iii) defines, with walls of the first junction, a first passageway of substantially annular cross-section through which the liquid sample flows as it flows from the inlet conduit to the detection conduit;

(9) a second arm which (i) lies within the second junction, and extends into the second junction, and (ii) defines, with walls of the second junction, a second passageway of substantially annular cross-section through which the liquid sample flows as it flows from the detection conduit to the outlet conduit; and

(10) ~~the~~ a first drain conduit which extends from the dead volume.

2. The following is an examiner's statement of reasons for allowance: The prior art of record neither teaches nor fairly suggests a microfluidic apparatus, a channel of which contains an elongate arm such as an electrode, a capillary or an optical fiber, such elongate arm forming a small dead space or volume with the wall of the channel and such space accumulating fluid during operation of the microfluidic device, wherein the space is continuously flushed by movement of fluid from the space and into a drain conduit, thereby preventing stagnation or accumulation of debris at the junction of the inlet and principal microfluidic conduits.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIMOTHY G. KINGAN whose telephone number is (571)270-3720. The examiner can normally be reached on Monday-Friday, 8:30 A.M. to 5:00 P.M., E.S.T..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TGK

/Jill Warden/
Supervisory Patent Examiner, Art Unit 1797